UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

STATEMENT OF BASIS

WDC Acquisition LLC
EPA ID No. IAD065218737
Solid Waste Landfill
1746 Commerce Road
Creston, Iowa

Facility/Unit Type:	Industrial Solid Waste Landfill
Contaminants:	Aluminum, arsenic, barium, beryllium, boron, cadmium, chloride, chromium, cobalt, copper, fluoride, iron, lead, lithium, magnesium, manganese, nickel, nitrate/nitrite-N, silver, sodium, strontium, sulfate, tin, zinc, vanadium, benzene, 1,1-dichloroethane, cis-1,2-dichloroethane, 1,3,5-trimethlbenzene, vinyl chloride, and xylenes
Affected Media:	Groundwater, soil, and surface water
Proposed Remedy:	Excavation of waste material, installing a landfill cover system, semiannual inspections of landfill cap and surrounding area, hydrologic monitoring, leachate control, and institutional controls

INTRODUCTION

This Statement of Basis describes the proposed corrective measures, the proposed final remedy for Solid Waste Management Unit (SWMU) 12 – Industrial Solid Waste Landfill at WDC Acquisition LLC (WDC). The facility is located at the northwest corner of the intersection of the U.S. Highway 34 and Osage Street in the Creston City Industrial Park in Union County, Iowa. This is just outside the city limits of Creston, Iowa. The supporting basis for the proposed final remedy for SWMU 12 is also presented here.

The U.S. Environmental Protection Agency (EPA) Region 7 is issuing this Statement of Basis as part of its public participation responsibilities under the Resource Conservation and Recovery Act.

This document highlights the information that is presented in more detail in the facility Administrative Record and provides a facility map which is attached at the end of this document. The Administrative Record information includes the Focused Corrective Measures Study Report for SWMU 12 and the other facility investigation documents. The EPA encourages the public to review these documents for a more complete understanding of the environmental issues at SWMU 12 and the corrective action activities that are proposed. The Administrative Record locations are noted at the end of this document.

PROPOSED FINAL REMEDY

The proposed final remedy for SWMU 12 - Solid Waste Landfill includes excavating non-hazardous solid waste material from the landfill until reaching the waste in-place grades, leaving waste in place, installing an Iowa Department of Natural Resource (IDNR) compliant final cover, with implementation of the IDNR Industrial Landfill Permit specified Closure/Post Closure Plan that includes monitoring the systems. These actions will be overseen by IDNR. The remedy also includes the placement of institutional controls on SWMU 12 to restrict land use to industrial, restrict disturbance of the cap, restrict excavation work, and prohibit groundwater use.

The facility will periodically monitor the systems to ensure that the long-term cap is still in place and effective. This monitoring will be on-going, and the results will be submitted to IDNR in the form of a report submitted twice a year or other frequency agreed to by IDNR. The EPA will also receive the monitoring reports with results for review in determining the effectiveness of the final remedy in protecting human health and the environment. The requirements for monitoring include the following:

1. Final Cover System
    a. Semiannual inspections to evaluate:
        i. Vegetation condition and coverage including the presence of invading species.
        ii. Soil condition including the presence of erosion and sedimentation disturbance due to boring vectors, desiccation, saturation, etc.
        iii. Cover system condition including ponding, settlement, and subsidence; and
        iv. Collection and diversion channel condition.
2. Hydrologic Monitoring System
    a. Semiannual monitoring:
        i. Groundwater sampling and analyses.
        ii. Groundwater elevations; and
        iii. Groundwater monitoring well condition and functionality.
3. Leachate Control System
    a. Semiannual inspection:
        i. Lateral collection and gathering piping east and south of the landfill.
        ii. Collection sump including sump structure, sump pump, and associated floats and valves.
        iii. Transfer piping and fixtures from sump to collection tank; and
        iv. Collection tank and ancillary bag filters.
    b. Discharge permit compliance

FACILITY BACKGROUND

In 1965, the facility was originally constructed as an aluminum and magnesium foundry and has operated under the same purpose since its construction. The initial owner was Hills McCanna Corporation of Chicago, Illinois. Between the years of 1971 and 1985 the facility operated under a variety of owners; however, in June of 1985, Fansteel, Inc. purchased the stock of Custom Technologies Corporation, a subsidiary of Fansteel, Inc. WDC later acquired the site assets in May 2018, pursuant to an asset purchase agreement and an environmental assignment and assumption agreement.

WDC manufactures magnesium and aluminum alloy castings primarily for the aerospace industry. This includes components and parts for aircraft, helicopters, missiles, rocket engines, and jet engines for both military and commercial use. Their involvement in non-aerospace applications and manufacturing have included 1,600-pound magnesium transfer pumps for the oilfield industry and porosity-free castings for computer chip manufacturing.

On January 23, 2004, pursuant to Section 3008(h) of the Resource, Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984 ("RCRA"), 42 U.S.C. §6901 et seq., the EPA issued an Administrative Order on Consent, Docket No. RCRA-07-2003-0167, ("AOC"), which requires WDC to perform a RCRA Facility Investigation ("RFI"), and a Corrective Measures Study ("CMS") in accordance with the EPA approved work plans. The purpose of the RFI is to determine the nature and extent of releases of hazardous waste or hazardous constituents from regulated units, SWMUs, and other areas of concern at the facility, and to gather necessary data to support the required CMS. Based on the results of the RFI, WDC is required by the AOC to conduct a CMS to develop, evaluate, and recommend the corrective action alternative(s) to be taken at the facility.

Solid Waste Landfill – SWMU 12

The solid waste landfill, SWMU 12, which is being considered for final remedy is estimated to be the same age as the rest of the facility, which means it was established in the 1960's. The use of this landfill resulted in numerous constituents being found and possibly impacting human health and the environment in the area. The landfill was originally designed to be 650 feet by 600 feet and reach a maximum depth of 15 feet; however, in the 1990's the waste depth maximum was expanded to 40 feet. In 2010 and with the approval of IDNR, excavation of non-hazardous solid waste material at the landfill began, this was used as daily cover in South Central Iowa Sanitary Landfill and other landfill locations. Excavation of the non-hazardous solid waste material from the landfill will stop prior to reaching the boundary of the low-level radioactive waste disposal area, which is being monitored by the Iowa Department of Public Health. It is also noted that a vast majority of the waste now present is silicon dioxide in the form of crystalline silica (common sand).

SUMMARY OF FACILITY RISKS

Within the WDC facility, Solid Waste Landfill - SWMU 12 poses multiple risks to the public and to the environment. The contaminated media includes soil, groundwater, and storm/surface water. This leaves the water in the area especially vulnerable to the exposed contaminants. The biggest concern of exposure is the open landfill waste which can not only contaminate the water, but also can be harmful to personnel who may encounter the waste. The chemicals of concern are as follows:

- Aluminum, arsenic, barium, beryllium, boron, cadmium, chloride, chromium, cobalt, copper, fluoride, iron, lead, lithium, magnesium, manganese, nickel, nitrate/nitrite-N, silver, sodium, strontium, sulfate, tin, zinc, vanadium, benzene, 1,1-dichloroethane, cis-1,2-dichloroethane, 1,3,5-trimethlbenzene, vinyl chloride, and xylene

However, the majority of the waste is made up of sand, baghouse dust, collector waste, and treated magnesium.

The landfill, which has no engineered liner system, does have a leachate collection system already in place and operating. However, the groundwater has come into contact with waste mass in the landfill, as

groundwater is reported to vary between 3 and 8 feet below ground surface, as documented in the 2018 Leachate Control System Evaluation Report.

In the 1993 RCRA Facility Assessment report, there is also mention of previous (1970's) low-level radioactive waste burials at the far western side of the landfill and chromium-bearing wastewater treatment sludge burials in the 1970's and 1980's. The location of these sludges could not be verified. The low-level waste burial area is being addressed under the terms and conditions of the existing Iowa Department of Public Health (IDPH) Radioactive Material License and is not part of the RCRA corrective action.

SUMMARY OF ALTERNATIVES

There were two proposed remediation options for Solid Waste Landfill - SWMU 12, one being no action, and the other being the installation of IDNR compliant final cover system. These were both evaluated based on the "General Standards for Corrective Measure," which is covered in the section after this.

The first option of no action would include continued excavation/removal of the solid waste landfill until it reached the waste in-place grades specified in the IDNR permit. It will then remain permanently exposed over the entirety of the landfill without controls, except as specified. This option offers no protection for the community or environment in the area that could be affected, nor would there be any regulations or monitoring of the potential impacted areas.

The other alternative proposed for remediation for SWMU 12 is continued excavation/removal of the solid waste landfill until it reached the waste in-place grades specified in the permit (similar to the no action alternative) and the installation of IDNR compliant cover system, with implementation of the IDNR permit specified closure/post closure plan. The cap construction will be reviewed and approved by IDNR and will generally consist of 2 feet of low permeability soils covered by 2 feet of soil cover designed to both protect the low permeability soils and promote vegetation growth. This cover system will act to protect the surrounding communities and environment that could be affected. There would also be monitoring systems in place to verify that the cap is protecting the impacted areas. This alternative is the proposed final remedy in this Statement of Basis, and as stated above includes institutional controls.

EVALUATION OF THE PROPOSED REMEDY AND ALTERNATIVES

For any corrective measure alternative evaluated for implementation as a final remedy for SWMU 12, detailed documentation must be provided on how the potential remedy will satisfy the EPA's four "General Standards for Corrective Measures." These four corrective measures standards are identified as "*Overall Protection of Human Health and the Environment*," "*Attainment of Media Cleanup Standards*," "*Control the Sources of Releases*," and "*Compliance with Standards for the Management of Wastes*."

The proposed final remedy for the solid waste landfill meets the standard for overall protection of human health and the environment because the EPA has determined that the landfill cap, groundwater monitoring, semiannual inspections, and leachate control system in conjunction with the institutional controls and reporting will be protective of human health and the environment.

The goal of the landfill cover is to prevent contact and ingestion of solid waste, contaminated groundwater and storm water to those in its proximity such as on-site workers, construction workers, off-site residents, and ecological receptors by isolating the contaminated material.

The installation of a cover will be done using commonly available material. It will consist of at least two feet of low permeability soils which is then covered in at least two feet of soil designed to both protect the low permeability soils and promote vegetative growth. This cap will isolate the waste mass below it and will consequently protect human health and the environment by controlling the source of release. With the cap in place, exposure and direct contact with the waste mass will be prevented. Precipitation will also be prevented from contacting the waste mass and transporting waste and/or leachate beyond the boundary of the waste capped in-place.

However, even with the wastes capped from surface exposure, the in-place wastes will continue to be in contact with shallow groundwater. The impacted groundwater will be addressed by a leachate collection system. In the long term, the groundwater quality should improve when the cap is in place along with the safeguards from the leachate collection system.

Corrective measure alternatives must also be evaluated using the five selection decision factors of *Short-Term Effectiveness; Long-Term Reliability and Effectiveness; Reduction of Toxicity, Mobility, or Volume of Wastes; Implementability;* and *Cost*. The proposed final remedy will be effective in the short-term, as the institutional controls can be implemented by the regulators and facility in a relatively short time period and the landfill cover has already been approved by the IDNR. Although the toxicity and volume of the capped landfill waste will remain the same, the mobility of the contaminants in the waste will be reduced. The materials for constructing this cap are readily available which makes the proposed final remedy readily implementable and cost effective. The proposed final remedy will achieve long-term reliability and effectiveness as it will result in a projected indefinite life of the cover system with proper care. In conclusion, the proposed remedy provides a reasonable approach to meeting the remediation goals identified above.

PUBLIC PARTICIPATION

The EPA solicits input from the public on the proposed remedy for SWMU 12 at the WDC Acquisition LLC Facility. Additionally, the EPA seeks comment on the study and analysis (Corrective Measures Study) that supports the Proposed Remedy. The EPA will make a final remedy decision for SWMU 12 at the facility and the Corrective Measures Study, only after the public comment period has ended and all comments have been reviewed and responded to in writing. The EPA may modify the proposed final remedy or select another remedy for SWMU 12 based upon new information or comments received from the public during the public comment period.

The EPA has set a comment period from February 24, 2023, to March 27, 2023, to encourage public participation in the final remedy selection process. A notice will be published in the Des Moines Register that the Statement of Basis, the Corrective Measure Study, and supporting documents are available for review. If requested, a public availability session will be held to allow the public an opportunity to discuss the proposed final remedy with the EPA representatives. A public hearing will be scheduled, if requested by the public and accompanied by a statement of issues to be raised in the hearing, at which the EPA will receive both oral and written comments. The Administrative Record, where the public may review the Statement of Basis and other relevant documents, is available at the following locations:

U.S. Environmental Protection Agency
Region 7
Records Center
11201 Renner Boulevard
Lenexa, Kansas 66219

Gibson Memorial Library
200 West Howard St.
Creston, Iowa 50801
Phone: (641)-782-2277
Text: (641)-435-3508

CONTACT: U.S. Environmental Protection Agency, Region 7 Attn: Patricia Murrow 11201 Renner Boulevard Lenexa, Kansas 66219 Phone: (913) 551-7627 Email: Murrow.Patricia@epa.gov	**CONTACT:** U.S. Environmental Protection Agency, Region 7 Community Engagement Coordinator Attn: Amelia Holcomb 11201 Renner Boulevard Lenexa, Kansas 66219 Phone: (913) 551-7952 Email: Holcomb.Amelia@epa.gov

Facility Map